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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Date: March 30, 2000

Subject: Himco Landfill

From: Doug Yeskis, Geologist Doug Yeskis
Remedial Response Section #2

To: Rick Grabowski, Geologist
U.S. Army Corps of Engineers-Omaha District

Enclosed are a couple of items for you. First, a copy of a memo discussing the preliminary geophysical logging results so that you may have some time to look them over. Second, are 3 copies of the key to the USGS wells in the area of the Himco Landfill. Third, is a copy of the USGS report, which is in the original orange cover, and which Gwen and I commonly refer to as the orange USGS report, so you now can see why we refer to it as such.

The final item I need to discuss is a follow up to our discussion last week on the USGS wells in the area of the Himco Landfill. You referred me to the USACE Pre-Design Technical Memorandum for the Himco Landfill site, dated March 1996. I have copied several pages, which are attached and concern two issues. First, why were certain USGS wells abandoned, and who completed the outer casings that were constructed around several USGS wells. In the March 1996 USACE report, on page 4-4 (yellow highlighted), the USACE states that the USACE constructed protective casings around the USGS wells. Later on this same page (blue highlighted), the USACE states that two wells were abandoned because of obstructions (E-2 and P-1). However, the USACE states that three wells (CP-1, M-1 and M-2) were abandoned because they were located within or immediately adjacent to the landfill. These statements lead to several questions:

1) Was the USGS ever contacted prior to the abandonment of their wells?
2) Have the State of Indiana abandonment codes been followed and has the state been notified about the abandonment?
3) What is the rationale for the USACE to abandon wells that are located on the landfill? There was no obstruction in these wells according to Table 4-1.

In addition, on page 4-4, the USACE states that landfill refuse and the calcium sulfate layer was found east of the Nappanee Street Extension (pink highlighted) when drilling the 114 cluster of wells. Has the USACE encountered any of these materials during the soil gas work? Is there any indication that this material is any further into the residential area, given the 114 cluster is in the backyard of the residential area? I appreciate your assistance in helping me further understand the history of the investigations on this site.

If you have any questions, please feel free to call me at 312-886-0408.

A summary of the monitoring and residential well survey is located in Table 4-1. In general, all the existing monitoring wells installed during the RI were found to be in good condition; however, suitable concrete well pads were not noted at any of these wells. A protective bollard was replaced at WT101B, and one was added at WT105A. All existing USGS wells with above-ground completions were also found to be in good condition, although these wells did not have outer protective casings, bollards, or a concrete well pad. None of the USGS wells with flush-mount completions appeared to have manholes which were properly grouted in. In addition, all of these flush-mount wells had a considerable amount of soil inside the manhole. Protective casings and bollards were installed at the following USGS wells which were recommended for future ground water monitoring: WTB1 through WTB4, WTE1, and WTE3. USACE had recommended that the manhole be replaced at WTO1; however, this was inadvertently overlooked. Should this well be used for future ground water monitoring as recommended by the USACE, then the manhole should be replaced and a locking well cap installed. A total of five wells were abandoned during this Pre-Design field effort. USGS monitoring wells WTE2 and WTP1 were abandoned due to obstructions located approximately 8.4 and 6.2 feet, respectively, below the top of the well riser. USGS wells WTCP1, WTM1, and WTM2 were abandoned as they were located within or immediately adjacent to the landfill. In addition, accumulated sediment in the screened interval of monitoring wells WTB2, WTB3, WTE3, and WT102C was removed.

Residential wells RW-06 and RW-07 have apparently been capped and no further action is required. Wells RW-08 and RW-09 are no longer in use, and it is recommended that these wells be abandoned. Well RW-10 is currently used by the landowner for watering their lawn and garden, and no further action is recommended as this well appears to be in good condition and constructed properly.

4.2.2 Soil Borings/Sampling for Monitoring Wells

A total of twelve soil borings were drilled and sampled at various locations around the Himco Site for the installation of monitoring wells. Originally, eleven soil borings/monitoring wells were proposed. Boring/well WT113B was added as a replacement for WTD3, which had been determined during the well survey to have been abandoned in the past. Borings for monitoring wells WT114A and WT114B were relocated approximately 140 feet from their original proposed location to the east side of John Weaver Parkway (Nappanee Street Extension) after encountering the calcium sulfate layer and landfill refuse while drilling at the original staked location. The original boring for monitoring well WT117B was abandoned due to difficulties in setting the subsurface casing. A new boring for the monitoring well was completed approximately 10 feet south of the first location.

All borings were completed with a Gus Pech 1100C truck-mounted drilling rig. Shallow monitoring well borings were drilled using 4 1/4-inch inside diameter (I.D.) hollow-stem augers, and intermediate monitoring well borings were drilled using 6 1/4-inch I.D. hollow-stem augers. The approved FSP Addendum called for the use of a CME continuous sample tube to obtain soil samples. This sampler was used for a portion of the first boring drilled (WT113B), then was

TABLE 4-1 (CONTINUED)
SUMMARY OF MONITORING AND RESIDENTIAL WELL SURVEY
PRE-DESIGN TECHNICAL MEMORANDUM
HIMCO DUMP SUPERFUND SITE
ELKHART, INDIANA

WELL NO.	CONDITION OF WELL	WATER LEVEL INFORMATION			(1) TOTAL DEPTH (FT)	ALIGNMENT TEST	RECOMMENDED ACTION
		DATE	ELEVATION (FT)	(1) DEPTH (FT)			
WTIIIA	GOOD CONDITION; LACKS SUITABLE CONCRETE WELL PAD.	8/7/95	753.02	11.38	19.76	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	CONTINUE USING FOR GROUND WATER SAMPLES AND ELEVATIONS.
WTB1 (WESTERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING , POSTS, OR CONCRETE WELL PADS.	8/7/95	755.67	6.13	200. (INSUFFICIENT TAPE LENGTH TO MEASURE BOTTOM OF HOLE)	BOTTOM OF SLUG PASSED THRU 325' OF WELL (INSUFFICIENT AMOUNT OF LINE TO REACH BOTTOM).	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER ELEVATIONS.
WTB2 (3RD WELL FROM THE EAST IN CLUSTER)	NO OUTER PROTECTIVE CASING , POSTS, OR CONCRETE WELL PAD.	8/7/95	755.09	6.11	7.64	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER ELEVATIONS.
WTB3 (2ND WELL FROM THE EAST IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/7/95	755.38	5.72	116.75	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER ELEVATIONS.
WTB4 (EASTERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/7/95	755.18	5.92	172.77	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER ELEVATIONS.
C1	ABANDONED.	(2) N/A	N/A	N/A	N/A	N/A	N/A
C3	ABANDONED.	N/A	N/A	N/A	N/A	N/A	N/A
C4	ABANDONED	N/A	N/A	N/A	N/A	N/A	N/A
WTCP1	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD. WELL WAS ABANDONED PRIOR TO OBTAINING WELL RISER ELEVATION AND STICKUP.	8/10/95	N/A	N/A	N/A	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	ABANDON-TOO CLOSE TO LANDFILL BOUNDARY.
WTD1	ABANDONED.	N/A	N/A	N/A	N/A	N/A	N/A

NOTES: 1. DEPTH IS REFERENCED TO THE GROUND SURFACE.
2. N/A-DATA NOT AVAILABLE OR NOT APPLICABLE. SEE COMMENT UNDER HEADING 'CONDITION OF WELL' FOR EXPLANATION.

TABLE 4-1 (CONTINUED)
SUMMARY OF MONITORING AND RESIDENTIAL WELL SURVEY
PRE-DESIGN TECHNICAL MEMORANDUM
HIMCO DUMP SUPERFUND SITE
ELKHART, INDIANA

WELL NO.	CONDITION OF WELL	WATER LEVEL INFORMATION			(1) TOTAL DEPTH (FT)	ALIGNMENT TEST	RECOMMENDED ACTION
		DATE	ELEVATION (FT)	(1) DEPTH (FT)			
WTD2	ABANDONED.	N/A	N/A	N/A	N/A	N/A	N/A
WTD3	ABANDONED.	N/A	N/A	N/A	N/A	N/A	N/A
WTE1 (NORTHERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/5/95	752.32	10.58	68.57	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER SAMPLES AND ELEVATIONS.
WTE2 (MIDDLE WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/5/95	N/A	10.00	12.52	BOTTOM OF SLUG DID NOT PASS BEYOND 8.44' BELOW TOP OF RISER.	ABANDON.
WTE3 (SOUTHERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/5/95	752.19	10.41	172.84	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	INSTALL PROTECTIVE CASING AND POSTS; CONTINUE TO USE FOR GROUND WATER SAMPLES AND ELEVATIONS.
WTM1 (NORTHERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/8/95	N/A	16.54	98.42	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	ABANDON ON LANDFILL.
WTM2 (SOUTHERN WELL IN CLUSTER)	NO OUTER PROTECTIVE CASING, POSTS, OR CONCRETE WELL PAD.	8/8/95	N/A	14.93	22.90	BOTTOM OF SLUG PASSED TO 17.9' BELOW THE TOP OF THE RISER.	ABANDON ON LANDFILL.
WTN1	ABANDONED.	N/A	N/A	N/A	N/A	N/A	N/A
WTO1	MANHOLE DOES NOT APPEAR TO BE PROPERLY GROUTED; SOIL INSIDE MANHOLE TO WITHIN 1' OF TOP OF RISER; THREADED PROTECTIVE CAP.	8/5/95	751.71	11.12	29.78	SLUG PASSED THROUGH ENTIRE LENGTH OF WELL.	REPLACE MANHOLE AND INSTALL A LOCKING CAP; CONTINUE USING FOR GROUND WATER SAMPLES AND ELEVATIONS.
WTP1	MANHOLE DOES NOT APPEAR TO BE PROPERLY GROUTED; SOIL INSIDE MANHOLE TO WITHIN 1' OF TOP OF RISER; WELL RISER IS NOT VERTICAL AT THE TOP; THREADED PROTECTIVE CAP.	8/5/95	N/A	9.62	20.71	BOTTOM OF SLUG DID NOT PASS BEYOND 6.25' BELOW TOP OF RISER.	ABANDON.

NOTES: 1. DEPTH IS REFERENCED TO THE GROUND SURFACE.
2. N/A-DATA NOT AVAILABLE OR NOT APPLICABLE. SEE COMMENT UNDER HEADING 'CONDITION OF WELL' FOR EXPLANATION.